![QQI - Quality and Qualifications Ireland / Dearbhú Cáilíochta agus Cáilíochtaí Éireann]

Independent Evaluation Report on an Application for Validation of a Programme of Education and Training

Part 1

Provider name	CCT College Dublin
Date of site visit	28 November 2019 **Note(s):** See *Appendix 1* for the following: • Agenda for site visit, 28 November 2019; • CCT attendees confirmed by the Dean of Academic Affairs, 28 November 2019. See *Appendix 2* for the following: • CCT programme validation submission documentation.
Date of report	12 December 2019

Overall recommendations

Principal programme	Title	Bachelor of Science (Honours) in Computing in Information Technology
	Award	Bachelor of Science in Computing (Honours)
	Credit	240 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	**Satisfactory subject to proposed conditions**

Embedded programme 1	Title	Bachelor of Science in Computing in Information Technology
	Award	Bachelor of Science in Computing (Exit)
	Credit	180 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	**Satisfactory subject to proposed conditions**

Embedded programme 2	Title	Higher Certificate in Science in Computing in Information Technology
	Award	Higher Certificate in Science in Computing (Exit)
	Credit	120 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	**Satisfactory subject to proposed conditions**

Expert Panel

Name	Role	Affiliation
Ms Eva Juhl	Chair	Institutional Review Facilitator, Office of the Registrar & Vice-President, Cork Institute of Technology (CIT)
Dr Brendan Ryder	Secretary	Head of Department of Visual and Human-Centred Computing, Dundalk Institute of Technology (DkIT)
Prof Martin McKinney	Subject Matter Expert	Professor Emeritus of Computing, Ulster University (UU)
Mr Paul Collins	Subject Matter Expert	Lecturer, Department of Computing, Institute of Technology Tralee
Ms Kate Bolger	Industry Representative	Assistant Manager, Student Recruitment – EY
Ms Yvana Mpessa	Learner	BCL Law and Business (NStep)

Principal Programme

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners *(per centre)*	Minimum number of learners
CCT College Dublin, 30-34 Westmoreland Street, Dublin 2.	- Full-time (FT): 900 over 5 years - Part-time (PT): 300 over 5 years - See pg. 17 of programme validation submission.	- Full-time (FT): 160 over 5 years - Part-time (PT): 100 over 5 years - See pg. 17 of programme validation submission.

Enrolment interval *(normally 5 years)*	Date of first intake	September 2020
	Date of last intake	August 2025
Maximum number of annual intakes	2	
Maximum total number of learners per intake	180 Full-time (FT) 60 Part-time (PT)	
Programme duration *(months from start to completion)*	4 years (48 months)	

Target learner groups

The proposed profile of the target learners include: domestic, European and International learners. Within this group there is a mix of school leavers and mature learners. Any learner suitably qualified to gain access to the proposed programme, can apply for access.

The following categories of learners will be targeted for the programme:

a) CAO applicants

b) Graduates of full QQI level 5 awards. Applicants must have achieved a pass mark in a Mathematics module in their QQI award, or have achieved a pass mark in Mathematics at Leaving Certificate level.

c) Suitably experienced ICT professionals, subject to meeting stringent Recognition of Experiential Prior Learning policy requirements

d) International students, EU and Non-EU, who meet access criteria as determined by a comparison using A World of Access by Douglas & Lennon (2011) and meeting stringent RPL and REPL policy requirements.

Further information on the target learner groups can be found *in Section 4: Access, Transfer and Progression Procedures, Criteria and Arrangements for the Programme* in the programme validation submission (pg. 83).

Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Full-time (FT), Part-time (PT)
Teaching and learning modalities	Lecture, lab, tutorial, workshop, project supervision, directed group work, and directed reading.

Brief synopsis of the programme:

- This programme has been designed to produce graduates with the attributes required of computing and IT graduates today and the ability to continue to develop knowledge, skill and competence to remain competitive and employable in an ever-advancing sector.
- The programme consists of 220 credits of taught module work and 20 credits of an applied development project. Learners who decide to leave the programme after completing the taught elements of one or more stages will be entitled to receive the embedded exit award of a Bachelor of Science in Computing in Information Technology (180 ECTS credits NFQ Level 7) or a Higher Certificate in Computing in Information Technology (120 ECTS credits NFQ Level 6).
- Graduates will be qualified to assume industry roles and/or to further their education at NFQ Level 9.
- See pg. 19 of the programme validation submission.

Summary of specifications for teaching staff	WTE

- **Academic and Professional:**
   o MSc desired. However, NFQ Level 8 in Computer Science, Software Development, Software Engineering or equivalent is acceptable in cases where significant industrial experience is evident. Industry experience will be essential for those who do not have a postgraduate award.
- **Pedagogical:**
   o Teaching experience is desired. Completion of a postgraduate CPD/Certificate in Teaching and Learning or similar preferred.
   o All new Lecturing staff are required to complete the CCT certificate in Teaching and Learning.
	2

• MSc or PhD in Computing with experience managing NFQ Level 8 or 9 Computing programmes including project/dissertation modules.	1

Learning Activity	Ratio of learners to teaching-staff
Laboratory work / Tutorials / Workshops	1:30
Lectures / Demonstrations	1:100
Supervised Project (Note: Additional WTE staff will be allocated as required)	1:4

Programmes being replaced (applicable to applications for revalidation)		
Code	Title	Last enrolment date
Not applicable	Not applicable	Not applicable

Other noteworthy features of the application

- The awards of Higher Certificate (120 ECTS credits) and Ordinary Degree (120 ECTS credits) are each embedded exit awards and will not be available ab initio. The awards are being provided for the small number of enrolled learners who decide, for personal reasons or who fail the subsequent stage, to leave the programme having achieved 120 credits and 180 credit respectively.

- The Panel notes that CCT has recently purchased the centre where programmes are delivered (30-34 Westmoreland Street, Dublin 2). This demonstrates the college's commitment to providing programmes in higher education in the long term.

Part 1A Evaluation of the Case for an Extension of the Approved Scope of Provision (where applicable).

Comment on the case for extending the applicant's Approved Scope of Provision to enable provision of this programme.

- Not applicable.

Part 2 Evaluation against the validation criteria

Criterion 1: The provider is eligible to apply for validation of the programme
a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.
b) The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.
c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[1]

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• CCT is a registered provider with QQI having undergone the required due diligence examination. The College currently holds validation to provide programmes up to Level 9 on the NFQ. QQI approved CCT's comprehensive QA system following the re-engagement process which concluded in December 2018 and an extension of scope to Level 9 in July 2019. • CCT has provided a declaration (pg. 2 of the programme validation submission) confirming that the information provided in the programme validation documentation for the three awards (BSc (Hons), BSc and Higher Certificate) is truthful and that all the applicable programme criteria have been addressed (as detailed in QQI's Policies and criteria for the validation of programmes of education and training, https://www.qqi.ie/Publications/Publications/Initial_Validation_policy_7_10_13.pdf). • CCT has confirmed (pg. 2 of the programme validation submission) that the programmes comply with applicable statutory, regulatory and professional body requirements. **Commendation(s)** • None. **Condition(s)** • None. **Recommendation(s)** • None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

[1] This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

Computing in Information Technology)		

Criterion 2: The programme objectives and outcomes are clear and consistent with the QQI awards sought
a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
(i) Where applicable, a QQI award is specified for each embedded programme.
c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
(i) Consistent with the title of the QQI award sought.
(ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
(i) The **minimum intended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[2]
(ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable. For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[3]

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation

Principal Programme	Yes	• The aims and objectives of the programme are clearly expressed. Section 2.1 (pg. 21) of the programme validation submission provides the programme aims, graduate attributes (also vision as described by the CCT programme development team) and educational objectives.
		
		• The QQI awards are clearly articulated:
		    o After 4 years (240 ECTS credits) gradates will receive a *Bachelor of Science Honours in Computing* in Information Technology (NFQ Level 8 award);
		    o After 3 years (180 ECTS credits) graduates will receive a *Bachelor of Science in Computing in Information Technology* (NFQ Level 7 award);
		    o After 2 years (120 ECTS credits) graduates will receive a *Bachelor of Science in Computing in Information Technology* (NFQ Level 6 award).
		
		• Section 2.2 (pg. 25) of the programme validation submission provides the rationale for the choice of awards and was informed by QQI policy and award standards, specifically Science and Computing, https://www.qqi.ie/Articles/Pages/Active-NFQ-Standards-for-HE.aspx) and relevant stakeholder feedback.

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[2] Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.

[3] Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

- The award titles fully comply with all statutory and regulatory requirements (professional requirements are not applicable for the programme). They are fully consistent with unit 3.1 of *QQI's Policy and Criteria for Making Awards*.

- With regard to expectations generated in relation to the programme content and curriculum, the programme title is adequately clear, accurate and unambiguous and is fully consistent with the awards sought and this is reflected in the aims and objectives of the programme and the curriculum being offered. Sections 2.6 (pg. 59) and 3.7 (pg. 73) of the programme validation submission provides a comparative analysis with similar programmes in higher education institutions (public and private) in both Ireland and the United Kingdom. Learners are other stakeholders will be in no doubt as to what is expected on the programme. The Panel is however making a recommendation on the title under Criterion 4.

- The minimum intended programme learning outcomes (MIPLOs) are explicitly specified as evidenced in Section 2.4 of the programme validation submission (pgs. 26-35).

- The MIPLOs are consistent with the QQI award standards, specifically Science (https://www.qqi.ie/Publications/Publications/Science%20-%20QQI%20Awards%20Standards.pdf) and Computing (https://www.qqi.ie/Publications/Publications/Computing%20-%20QQI%20Awards%20Standards.pdf). The Panel notes that CCT also considered the incorporation of the European e-Competence Framework (https://www.ecompetences.eu/).

- Section 2.5 of the programme validation submission (pgs. 36-55) provides the mapping of the programme learning outcomes to the QQI award standards. CCT mapped directly to the Computing standards and completely a "best-fit" mapping to the Science standards. The Panel notes that CCT completed an extensive analysis of the applicability of the relevant QQI award standards to the programme.

- The minimum intended module learning outcomes (MIMLOs) are explicitly specified for each of the programme modules with MIMLOS mapped to MIPLOs as appropriate. Section 2.5.3 (pgs. 56-58) provides an analysis of the mapping of the MIMLOs to the PLOs.

- Section 7 of the programme validation submission (pg. 128) provides an overview of programme modules by year (in tabular format). Detailed module descriptors are contained in *Appendix 11: Programme Module Descriptors*.

- Sub-criterion (i) (see above) relating to minor awards is not applicable to this programme. There are no minor awards.

Commendation(s)

- None.

Condition(s)

- None.

Recommendation(s)

- None.

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 3: The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[4]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
   (i) There is a satisfactory rationale for providing the programme.
   (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
   (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
   (iv) There is evidence[5] of learner demand for the programme.
   (v) There is evidence of employment opportunities for graduates where relevant[6].
   (vi) The programme meets genuine education and training needs.[7]

c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.

d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or professionally oriented.

e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• The programme has been designed to provide opportunities to full-time and part-time, national and international learners to develop the knowledge, skills and competences in Computing, specifically in Information Technology (at NFQ Levels 8, 7 and 6), that will make them employable in areas where skills shortages have been identified by employers.

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[4] Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.

[5] This might be predictive or indirect.

[6] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.

[7] There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

- CCT has articulated in the programme validation submission, and demonstrated during the site visit, a clear demand and rationale for the programme. Section 3.1 (pg. 65) of the programme validation submission provides the rationale for the programme and skills shortage/gap reports (national and international), sectoral reports, etc. are referenced on pg. 81 of the programme validation submission.

- The CCT programme development team has consulted extensively with learners, graduates, employers and other stakeholders as evidenced in Section 3.3 (pgs. 69-72) of the programme validation submission. Evidence of engagement with and endorsement from employers/industry partners can be found in *Appendix 2 – Employer Engagement Forum Guide* and *Appendix 3: Consultation with Industry – Programme Development* of the programme validation submission. An Employer Register, which complements the Employer Engagement Forum Guide and details the level of engagement of industry partners (a continuum of employer engagement), was provided in hardcopy during the programme validation site visit.

- Evidence of learner demand for the programme, which is comprised of sectoral reports and developments (e.g. the introduction of the Computer Science subject in the Leaving Certificate), CCT experience and learner feedback, can be found in Section 3.8 (pgs. 76-78) of the programme validation submission.

- CCT has given careful consideration to the programme design to ensure that the knowledge, skills and competencies developed are aligned to industry requirements and the award standards (Science and Computing in this instance). Sections 2.6 (pg. 59) and 3.7 (pg. 73) of the programme validation submission (also referenced under Criterion 2 above) provide a comparative analysis with similar programmes in higher education institutions (public and private) in both Ireland and the United Kingdom. This was used to inform the programme curriculum and structure. As noted under Criterion 2 above, the Panel notes that CCT completed an extensive analysis of the applicability of the relevant QQI award standards to the programme.

- CCT has provided clear evidence of employment as evidence in Section 3.9 (pg. 78) of the programme validation submission.

- CCT quality assurance and enhancement mechanisms are used to ensure that the programme is updated. Section 3.12 (pg. 80) of the programme validation submission provides evidence of such mechanisms, and includes the following (internal and external) QA mechanisms:

  - Programme Committee (Board) Meetings;
  - Student Representative Meetings;
  - External Examiner Reports and Feedback;
  - Annual Programme Review and Quinquennial Review;
  - CCT Management Team;
  - Industry Review;
  - Programme Alumni.

Commendation(s)

- The Panel commends CCT's ongoing engagement with relevant stakeholders, particularly with learners and industry. The provision of the Employer Engagement Forum Guide and associated Employer Register is a good example of best practice in the area of industry engagement.

		Condition(s) • None. **Recommendation(s)** • None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 4: The programme's access, transfer and progression arrangements are satisfactory

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[8].

b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[9]) in order to enable learners to reach the required standard for the QQI award.

d) The programme specifies the learning (knowledge, skill and competence) that **target learners** are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).

e) The programme includes suitable procedures and criteria for the **recognition of prior learning** for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.

f) The programme title (the title used to refer to the programme):-
   (i) Reflects the core *intended programme learning outcomes*, and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).
   (ii) Is learner focused and meaningful to the learners;
   (iii) Has long-lasting significance.

g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

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[8] Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria   are (QQI, restated 2015) arranged under the headings
-   Progression and transfer routes
-   Entry arrangements
-   Information provision
[9] http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• Clear requirements regarding access, transfer and progression (ATP) have been provided for the NFQ Level 8 award. The NFQ Level 6 and 7 awards are Exit Awards and leaners cannot gain entry directly into these programmes. The programme is aligned with QQI's Access Transfer and Progression (ATP) Policy (https://www.qqi.ie/Articles/Pages/Access,-Transfer-and-Progression.aspx). • Entry requirements for CAO, Mature, International (including English language proficiency requirements; CEFRL B2+ for this programme) and learners who wish to be considered under CCT's Recognised Prior Learning (RPL) Policy (Policy Reference in CCT's Quality Manual: CCTP602; https://www.cct.ie/quality-assurance/) are provided in Section 4.2 (pg. 84) in the programme validation submission. • Programme information is provided in plain language for learners and is available in a range of accessible formats. Section 4.1 (pg. 83) in the programme validation submission describes learner information. Information on the programme is made available to prospective learners using CCT's website (https://www.cct.ie/) and brochure material. Information is provided to registered/enrolled learners in the form of a Programme Handbook (evidenced in *Appendix 5 - Programme Induction Pack* in the programme validation submission) and also through the CCT's Virtual Learning Environment (Moodle). CCT comply with QQI regulations (Core Statutory Guidelines in relation to public information and to Protection of the Enrolled Learner (PEL) (https://www.qqi.ie/Articles/Pages/Protection-for-Enrolled-Learners-(PEL)-.aspx) (evidenced in CCT's Protection of Enrolled Learners – Public Information 2019 Policy; Policy Reference in CCT's Quality Manual: CCTP701). • The programme title clearly reflects QQI requirements for major awards, the award level and the discipline (in this case computing in Information Technology). The title is legitimate and complies with applicable statutory and regulatory requirements (professional body requirements are not relevant for this programme). The justification for the title can be found in *Sections 2.2: Rationale for the choice of QQI named award stem sought and for the named award title* (pg. 25) and *3.7: Comparison with Other Programmes* (pg. 73) of the programme validation submission. • Award titles were also considered under Criterion 2 above. **Commendation(s)** • None. **Condition(s)** • None. **Recommendation(s)** • The CCT programme development team should review the programme title so that it reflects the employment spectrum of its graduates better and with more immediacy, which in turn will make the programme more attractive to prospective leaners.
Embedded Programme 1	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

(BSc in Computing in Information Technology)		
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 5: The programme's written curriculum is well structured and fit-for-purpose

a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.

b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.

c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.

d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.

e) The programme is structured and scheduled realistically based on sound educational and training principles[10].

f) The curriculum is comprehensively and systematically documented.

g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.

h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.

i) Elements such as practice placement and work-based phases are provided with the same rigour and attentiveness as other elements.

j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[11]

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• The programme is well documented, well-structured, coherent and designed so that the learner can achieve the intended programme learning outcomes. This is evidenced in *Section 5: Written Curriculum* (pg. 88) and *Section 6: Proposed Programme Schedules* (pgs. 113). • Each module and stage is suitably structured and designed so that the learner can achieve the intended programme learning outcomes.

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[10] This applies recursively to each and every element of the programme from enrolment through to completion.
In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.

[11] If the duration is variable, for example, when advanced entry is available, this should be explained and justified

- There is no module choice on the programme. The justification for this design decision is provided in Section 3.7 (pg. 73). Learners can however personalise their learning using assessments.

- There is clear alignment of MLOs with Stage Learning Outcomes (SLO) and Programme Learning Outcomes (PLOs). Section 2.5 of the programme validation submission (pgs. 36-55) provides the mapping of the programme learning outcomes to the QQI award standards. CCT mapped directly to the Computing standards and conducted a 'best-fit' mapping to the Science standards. The minimum intended module learning outcomes (MIMLOs) are explicitly specified for each of the programme modules with MIMLOS mapped to MIPLOs as appropriate. Section 2.5.3 (pgs. 56-58) provides an analysis of the mapping of the MIMLOs to the PLOs.

- Section 7 of the programme validation submission (pg. 128) provides an overview of programme modules by year (in tabular format). Detailed module descriptors are contained in *Appendix 11: Programme Module Descriptors*. (**Note:** PLOs etc. were also considered under Criterion 2 above).

- The aims, objectives and learning outcomes of the programme and their associated modules are clear and are logically presented in the programme validation submission.

- The credits allocated to the programme are consistent with QQI award types and durations and consistent with the difference between the entry standard and minimum intended programme learning outcomes:
    - Bachelor of Science Honours in Computing in Information Technology (NFQ Level 8 award) – 240 ECTS credits – 4 years.
    - Bachelor of Science in Computing in Information Technology (NFQ Level 7 award) – 180 ECTS credits) – 3 years;
    - Bachelor of Science in Computing in Information Technology (NFQ Level 6 award) – 120 ECTS credits – 2 years.

- The credits allocated to each module are consistent with the difference between the module entry standard and minimum intended module learning outcomes.

- The Panel notes that there is no work placement proposed for the programme. The justification for this decision can be found in *3.7: Comparison with Other Programmes* (pg. 73) of the programme validation submission. See Recommendation(s) below.

- The programme duration is consistent with national norms for ab-initio undergraduate programmes.

Commendation(s)

- The Panel commends the CCT programme development team for the adoption of a programme integrated assessment strategy as provided in the programme validation submission (pg. 70). Stages Two to Four (i.e. all award stages) include what are called "Level Completion Modules" (Stage Two: 5 ECTS credits; Stage Three: 10 ECTS credits; Stage Four: 20 ECTS credits) (as evidenced in *Section 6: Proposed Programme Schedules*). These capstone modules are designed to integrate and scaffold student learning, promote formative feedback and ultimately reduce assessment overload (but see Criterion 10 also).

Condition(s)

- None.

		Recommendation(s)
		• The Panel acknowledges the justification provided by the CCT programme development team in relation to not including work placement on the programme. In view of the pedagogical and experiential value of work placement, the Panel however recommends that the programme development team further consider the incorporation of work placement into the programme. This further consideration of work experience can be aided by leveraging existing operational experience and quality assurance frameworks for work placement from across the Higher Education sector. • In the absence of work placement, CCT should strive to strengthen the industry involvement in their programme, for example by introducing series of industry speakers, routinely using industry-relevant case studies, etc. • It is recommended that CCT develop a weekly and annual delivery schedule for the Part-Time (PT) delivery mode well in advance of actual delivery in order to anticipate and plan for possible implementation issues. • CCT should clearly document the transition arrangements for the different student cohorts currently enrolled on the existing cognate degree programmes which are about to be retired/ceased. This information should then be made available to learners in an appropriate fashion. • See the section entitled "**Modules Feedback**" below for recommendations relating to specific module descriptors (see *Appendix 11 – Programme Module Descriptors*).
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Modules Feedback

Module Title	Note(s)
General	• Reading lists should be reviewed to ensure that they are up to date. • Module learning outcomes should be reviewed to ensure that they are written at the appropriate NFQ level and that their attainment is demonstrable. • The table showing the programme streams on pg. 59 of the programme validation submission needs to be corrected.
Introduction to Artificial Intelligence	• Amend the module title to Artificial Intelligence.
Object-Oriented Analysis and Design	• The programme development team should ensure that the module is categorised correctly in the programme streams (currently in the Traversal Skills stream).
Data Visualisation and Communication	• The programme development team should ensure that the module is categorised correctly in the programme streams (currently in the Traversal Skills stream).

Professional Development	• Consider moving this module to an earlier programme stage, where it may bring additional benefits to learners. While there is no work placement module, students will be encouraged to seek suitable internships in the summer months. Delivering *Professional Development* earlier (possibly even in Stage 1) would better prepare students to apply for such internships. The team might furthermore review the level of the module material, to ensure that the demands of this module merit the number of credits and are broadly in line with the level of the stage.
High Productivity	• The programme development team should consider changing the module title to a title which is less dogmatic and better reflects the content and intended outcomes of the module. • Ensure the reading list is up to date and appropriate to the module content and intended outcomes.
Wireless Networking	• The Module Content, Organisation and Structure section needs to be added to the module descriptor (currently missing).
Algorithms, Architecture and Design Patterns	• The programme development team should review the volume and relevance of the content proposed for this module.
Introduction to HCI	• The programme development team should correct the entry for the module in the indicative timetable.

Criterion 6: There are sufficient qualified and capable programme staff available to implement the programme as planned

   a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to-practise where applicable, experience and the staff/learner ratio requirements. **See also criterion 12 c).**
   b) The programme has an identified complement of staff[12] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.
   c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.
   d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[13] opportunities[14].
   e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.
   f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• The programme will have full-time and part-time staff who are available, qualified and capable of delivering the programme. All staff who are required to plan, deliver and manage the programme are currently employed by CCT and have taught on programmes at NFQ Levels 6, 7 and 8. Additional staff will

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[12] Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

[13] Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

[14] Professional or vocational education and training requires that teaching staff's professional/vocation knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

be recruited as required in accordance with CCT Policy (CCT Quality Manual, *Section 8: Staff and Human Resources; Recruitment Selection and Probation 2019 (CCTP801))*.

- CCT is a member of the Higher Education Colleges Association (HECA) and is committed to the implementation of the HECA induction programme, a dedicated resource manual aimed at providing a comprehensive induction to staff (CCT Quality Manual, Section 8: *Staff and Human Resources; Staff Induction 2019* (CCTP802)).

- The specification of staff, both academic/professional and pedagogical, required to teach on the programme is provided on pg. 19 of the programme validation submission. The specification of staff required to teach particular module(s) is provided in the module descriptors (see *Appendix 11 – Programme Module Descriptors*). CCT identified the need to build further capacity in the area of project/dissertation supervision (pg. 132 of the programme validation submission). Current staff profiles, which include those staff in the ICT discipline area, are publicly available on the CCT website (https://www.cct.ie/ict-faculty/).

- CCT is fully committed to providing staff development opportunities to its staff (CCT Quality Manual, *Section 8: Staff and Human Resources; Scholarship, Professional Development, Innovation and Research 2019 (CCTP805))*. This is further evidenced in *Section 8: Programme Staff* (pg. 130) of the programme validation submission. CCT has established a Centre for Teaching and Learning which promotes the professionalisation of teaching in Higher Education and provides professional development programmes to staff. These include short courses and workshops delivered by internal and external academics as well as the *CCT Certificate in Teaching and Learning* which is mapped to the National Forum Professional Development Framework (https://https://www.teachingandlearning.ie/publication/national-professional-development-framework-for-all-staff-who-teach-in-higher-education/).

- CCT has a performance management system in place which is operated in accordance with CCT policy (CCT Quality Manual*, Section 8: Staff and Human Resources; Performance Management Appraisal 2019 (CCTP804))*. Performance management is also facilitated using the following mechanisms (pg. 131 of the programme validation submission):

    o Staff Induction for all academic staff (see above);
    o Classroom Observation undertaken by the Dean of School;
    o Annual Training plan focussing on best practice in Learning and Teaching;
    o Support to attend conferences, working groups, seminars and national events;
    o Student Feedback surveys.

Commendation(s)

- The Panel commends CCT's ongoing commitment to staff Continuing Professional Development for FT and PT staff, both discipline-specific and pedagogical.

Condition(s)

- None.

Recommendation(s)

		• None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 7: There are sufficient physical resources to implement the programme as planned
a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).
b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:
(i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)
(ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
(iii) printed and electronic material (including software) for teaching, learning and assessment
(iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
(v) technical support
(vi) administrative support
(vii) company placements/internships – if applicable
c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).
d) There is a five-year plan for the programme. It should address
(i) Planned intake (first five years) and
(ii) The total costs and income over the five years based on the planned intake.
e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

	Satisfactory? (yes, no, partially)	**Commentary – please identify evidence to support recommendation**

Principal Programme	Yes	• CCT has the necessary physical resources in place to deliver a high-quality programme, thus providing an excellent student experience (see *Section 9: Physical Resources* in the programme validation submission). These include the following:
		  o Premises;
		  o Information Technology Infrastructure – including the provision of a Virtual Learning Environment (Moodle), equipment borrowing facilities;
		  o Computer Laboratories;
		  o Classrooms and study spaces;
		  o Library resources;
		  o Projection, printing and photocopying facilities;
		  o Recreation spaces;

		o Canteen facilities. • Physical resources are reviewed by CCT on an ongoing basis to ensure that they are 'fit-for-purpose'. The Panel is of the view that CCT has given due consideration to increasing scale and has reviewed its operations in this context. • Administrative support is provided by the administration staff which is led by the Dean of Administration and Finance (see *Appendix 3: CCT Organisation Chart* (pg. 13 of the programme validation submission). • A five-year plan that addresses planned intake, costs and income has been provided (see *Sections 3.10: Planned Intake* (pg. 79), *3.11: Five-year plan for the proposed programme* (pg. 79) and *9.5: Five-year plan for the programme* (pg. 144) of programme validation submission. CCT is planning to deliver the programme in full-time mode initially, with two intakes of full-time students per year (September and February). Further down the line, the college intends to add a part-time delivery with one annual intake if the confirmed demand satisfactorily bears out the initial projections. In the Panel's view the costings provided are realistic and adequately take into account the requirements of the planned deliveries. • CCT has a clear policy and procedure regarding Intellectual Property (IP) of its programmes, and has ownership or formal legal agreements relating to all materials, equipment and premises (pg. 147 of programme validation submission). • See Criterion 8 below for additional commentary relating to the student experience. **Commendation(s)** • The Panel notes that CCT has recently purchased the centre where its programmes are delivered (30-34 Westmoreland Street, Dublin 2). The Panel commends CCT's inherent commitment to the provision of high-quality programmes in Higher Education as a long-term goal and enterprise. **Condition(s)** • None. **Recommendation(s)** • None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 8: The learning environment is consistent with the needs of the programme's learners

a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.

b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.

c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• The programme's physical, social, cultural and intellectual environment including resources and support systems are consistent with the intended programme learning outcomes. • Learners attend an induction at the commencement of their studies and are supported academically by lecturers who apply best practice in learning, teaching and assessment. The Student Success Lead (pg. 10 of the programme validation submission) supports the Dean of School in the proactive development of the student mentoring academy and implementing strategies to advance learning, engagement and completion of programmes. Learners can make use of academic skills support, study skills support, careers support and pastoral support (pgs. 140, 141 of the programme validation submission). Supports are also provided to learners with additional needs and those with disabilities (pgs. 108, 109 of the programme validation submission). International student supports are provided in accordance with the *QQI Code of Practice for Provision of Programmes of Education and Training to International Learners* (https://www.qqi.ie/Downloads/Code%20of%20Practice.pdf). • Sub-criterion (c) is not applicable as there is no work placement proposed for the programme. • The Panel notes that CCT is aware of the need to scale up the existing informal system of supports with growing student numbers and has taken active steps to appropriately formalise their support system. • Section 9: *Learning Resource and Student Support* of the CCT Quality Manual provides policies and procedures relating to student supports; https://www.cct.ie/quality-assurance/). **Commendation(s)** • The Panel commends the systematic supports provided to learners, particularly international students. Student success and well-being are at the heart of CCT's culture. • The Panel commends CCT for the development of student success initiatives and for their introduction of the Student Success Lead role. This is in line with best practice relating to student success (https://www.teachingandlearning.ie/publication/understanding-and-enabling-student-success-in-irish-higher-education/). **Condition(s)**

		• None. **Recommendation(s)** • None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 9: There are sound teaching and learning strategies		
a) The teaching strategies support achievement of the intended programme/module learning outcomes. b) The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes. c) The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload). **d)** Learning is monitored/supervised. **a)** Individualised guidance, support and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.		
	Satisfactory? (yes, no, partially)	**Commentary – please identify evidence to support recommendation**
Principal Programme	Partially	• The teaching and learning strategies support the achievement of the intended programme and module learning outcomes by providing authentic and realistic learning opportunities (but see Criterion 5 on enhancement potential in relation to work placement). At a programme level the teaching and learning strategies and their support for the learning outcomes are evidenced in Section 5.5 of the programme validation submission. Module descriptors, which include teaching and learning strategies, are documented in *Appendix 11 - Programme Module Descriptors*. • The programme development team paid particular attention to the learner workload (see Criterion 5, and also 10) and every effort was made to ensure a balanced workload. Formative and well as summative feedback (e.g. pg. 70 of the programme validation submission) is provided throughout the programme. • Programme learning will be monitored, supervised and assessed in accordance with CCT's Teaching, learning and assessment policies (Section 5: *Teaching, Learning and Assessment*; https://www.cct.ie/quality-assurance/). **Commendation(s)** • None.

		Condition(s) • The Panel proposes as a condition for validation that the programme development team should define and document the teaching and learning workload types (both contact and non-contact) in, and specific to, each module descriptor. This should be done in a way that both demonstrates the correlation of teaching and learning methods with the intended module learning outcomes and expresses, at the level of the module, the methodological progression throughout the programme in line with the learners' growing capacity for independent learning and problem-solving. **Recommendation(s)** • The programme development team should review the Approved Programme Schedules (APSs) to ensure that the amount and type of contact hours allocated to each module accurately reflect the gradual development of the learner's capacity for independent learning and problem solving.
Embedded Programme 1 (BSc in Computing in Information Technology)	Partially	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Partially	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 10: There are sound assessment strategies

   b) All assessment is undertaken consistently with *Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards*[15]

   c) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.

   d) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme.[16]

   e) The programme includes formative assessment to support learning.

   f) There is a satisfactory written **programme assessment strategy** for the programme as a whole and there are satisfactory module assessment strategies for any of its constituent modules.[17]

   g) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable.

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[15] See the section on transitional arrangements.

[16] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.

[17] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.

	h) There are sound procedures for the moderation of summative assessment results.
	i) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have been specifically assessed against the standard for that award.[18]

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Partially	• Programme assessment is conducted in accordance with *CCT's Marks and Standards* and Teaching, Learning and assessment policies (*Section 5: Teaching, Learning and Assessment*; https://www.cct.ie/quality-assurance/). All assessment policies and procedures have been informed by and are aligned with the relevant QQI conventions and protocols.

• CCT's standard policies and procedures for assessment are based on the principles of fairness, consistency, authenticity and transparency and apply to the programme. There is an external examining system in place to ensure that assessments standards are met.

• CCT has embedded formative and summative assessment best practice into the programme (as can be seen in the module descriptors, *Appendix 11 – Programme Module Descriptors* in the programme validation submission).

• Careful consideration of the issue of learner over-assessment is also evident. The programme development team has implemented a best practice (https://www.teachingandlearning.ie/our-priorities/student-success/assessment-of-for-as-learning/) programme integrated assessment (IA) strategy as provided in the programme validation submission (pg. 70). The three "Level Completion Modules" in Stages Two to Four (with 5, 10 and 20 ECTS credits respectively) (as evidenced in *Section 6: Proposed Programme Schedules*) are designed to integrate and scaffold student learning, promote formative feedback and ultimately reduce assessment overload (see Criterion 5 above also).

• Module assessment strategies are partially provided in *Appendix 11 – Programme Module Descriptors* (see Condition(s) below). An indicative programme assessment schedule is provided in *Appendix 8 – Programme Indicative Assessment Schedule,* while sample assessments are provided in *Appendix 9 – Sample Assessment*. During the site visit the programme development team also provided sample assessment briefs and marking schemes.

Commendation(s)

• The Panel commends the CCT programme development team for the adoption of a programme integrated assessment (IA) strategy.

Condition(s)

• The Panel proposes as a condition for validation that the programme development team should define and document the parameters for the assessment of the module learning outcomes (in terms of assessment type and weighting for CA assessments and of outcomes covered) in, and specific to, each module descriptor. The Approved Programme Schedules (APSs) and module descriptors represent the contract with the student, and the student |

[18] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

		should reasonably be able to determine from these how the module credit is to be attained from the outset. **Recommendation(s)** • None.
Embedded Programme 1 (BSc in Computing in Information Technology)	Partially	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Partially	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 11: Learners enrolled on the programme are well informed, guided and cared for

a) There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.

b) Information is provided about learner supports that are available to learners enrolled on the programme.

c) Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.

d) If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.

e) The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.

f) There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.

g) The programme provides supports for enrolled learners who have special education and training needs.

h) The programme makes reasonable accommodations for learners with disabilities[19].

i) If the programme aims to enrol international students it complies with the *Code of Practice for Provision of Programmes to International Students*[20] and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.

j) The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation
Principal Programme	Yes	• CCT's quality system ensures that learners are informed about the college, its organisation, and the various elements of the programme of study (including assessments requirements, appeals and complaints). • Information relating to CCT and the programme is made available to prospective learners using CCT's website (https://www.cct.ie/) and brochure material. Information

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[19] For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).

[20] See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

is provided to registered/enrolled learners in the form of a Programme Handbook (evidenced in *Appendix 5 – Programme Induction Pack* in the programme validation submission) and also through the CCT's Virtual Learning Environment (Moodle). CCT complies with QQI core policy in relation to public information (https://www.qqi.ie/Publications/Publications/Initial_Validation_policy_7_10_13.pdf) (evidenced in CCT's Public Information 2019 Policy; policy reference in CCT's Quality Manual: CCTP1101). See commentary in relation to Criterion 4 above also.

- See Criterion 8 above for information on supports provided to learners on the programme (including international learners and those with disabilities, etc.).

- There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who require it.

Commendation(s)

- See commendations under Criterion 4 above.

Commendation(s)

- None.

Recommendation(s)

- None.

Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.

Criterion 12: The programme is well managed

   a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.

   b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.

   c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.

   d) There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements, and can be added to the programme's complement of supported physical resources.

	Satisfactory? (yes, no, partially)	Commentary – please identify evidence to support recommendation

Principal Programme	Yes	• CCT has a governance structure that allows them to effectively provide higher education programmes at Level 6, 7 and 8 of the National Framework of Qualifications.
		
		 • It is clear that CCT has an ongoing commitment to providing quality higher education, and continuous improvement and reflection are embedded in the culture of the organisation.
		
		 • CCT has a comprehensive, well-documented quality system in place that was approved recently as part of the QQI re-engagement process (Date of application: 12 June 2018; date of evaluation: 29 August 2018; date of report to QQI: 8 October 2018).
		
		 • Documented policies and procedures can be found on the CCT website at: https://www.cct.ie/quality-assurance/.
		
		 • CCT's quality system is informed by and aligned with the European Standards and Guidelines (https://enqa.eu/index.php/home/esg/), QQI's policies, guidance and protocols, and includes the following:
		    o **Approval:** CCT Quality Manual: CCTP401 – Validation Policy 2019 and CCTP402 – Programme Review and Revalidation Policy 2019;
		    o **Monitoring:** CCT Quality Manual: CCTP403 – Programme Management and Annual Monitoring Policy 2019
		    o **Periodic Review:** CCT Quality Manual: CCTP1201 – Self-Evaluation Monitoring and Review 2019 and CCTP1202 – External Review 2019.
		
		 • The programme was designed and developed in accordance with CCT's Recognised Prior Learning (RPL) Policy (policy reference in CCT's Quality Manual: CCTP602; https://www.cct.ie/quality-assurance/).
		
		 • The programme validation documentation provides the criteria for the selection of staff to teach the modules on the programme (evidenced in *Appendix 11 – Programme Module Descriptors* in the programme validation submission).
		
		 • CCT has confirmed, both in the programme validation submission and on the day of the site visit, that they are committed to providing all required facilities and resources in order to run the programme. CCT has mechanisms and criteria in place for determining the adequacy of existing facilities and resources and for identifying and procuring additional facilities and resources.
		
		 • There are arrangements in place relating to the operation and management of programmes as evidenced in *Section 10: Programme Management* in the programme validation submission (Programme Boards, Examination Boards,

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[21] See also QQI's Policy on Monitoring (QQI, 2014)

		Academic Council, etc.). CCT has confirmed that all relevant mechanisms – including that of a Programme Board – will also apply to this programme. • QQI has procedures agreed with QQI in relation to the transfer of assessment results, endorsing learner achievement of learning outcomes and facilitating the production of parchments by QQI to underpin certification. **Commendation(s)** • None. **Condition(s)** • None. **Recommendation(s)** • The programme submission documentation should clarify the number of external examiners for the programme in accordance with CCT QA policies and procedures.
Embedded Programme 1 (BSc in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 2 (HC in Computing in Information Technology)	Yes	• Commentary provided for the Principal Programme above applies to the embedded programme.
Embedded Programme 1		
Embedded Programme 2		

Overall recommendation to QQI

Principal programme: Bachelor of Science (Honours) in Computing in Information Technology

Select one	Outcome
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
X	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. Overall the Panel considers the proposed BSc (Honours) in Computing in Information Technology, with two embedded exit awards at NFQ Levels 6 and 7, to be a well-designed, good-quality programme which will provide graduates with a valuable and widely recognised qualification in the Computing domain. In the Panel's view the programme will suitably equip graduates for entry into a wide range of professional roles as well as for progression to postgraduate study. Projections on demand from potential learners and employers are soundly based and underpinned by comprehensive research. The award and programme title for the principal and embedded programmes are appropriate and comply with all relevant QQI requirements. The exit awards offered support the progression needs of learners who are unable to complete the principal programme. The minimum intended programme outcomes for the principal and embedded programmes align well with the relevant QQI award standards and provide suitable summaries of the intended graduate profiles at each level. Achievement of the programme outcomes is well supported by the programme curriculum and by the college's approach to teaching, learning and assessment to be applied to the programme. The teaching, learning and assessment strategies overall are well considered and clearly learner-centric, with some minor deficiencies noted by the Panel in relation to the detailed description of these strategies at the level of the module descriptor (see conditions). The quality systems and programme management structures in place at CCT appear suitable to ensuring the efficient operation of the programme while assuring programme quality and standards. They also provide adequate opportunities for learner participation and feedback. Accurate information on the programme and award(s) will be made available to learners and other stakeholders in suitable formats. The proposed Honours programme can draw on a complement of well-qualified and enthusiastic staff, and the college's enduring commitment to the further professional development of its staff struck the Panel as exemplary. Appropriate physical resources and learner supports to ensure a good-quality learning experience for learners from diverse backgrounds are in place. CCT's express commitment to continuously review and adapt resources to ensure sustainability of programme delivery into the future is noted.

Commendation(s)

1. The Panel commends the comprehensive programme validation documentation provided and acknowledge the proactive engagement of all CCT staff during the site visit.

2. The Panel commends CCT's ongoing engagement with relevant stakeholders, particularly with learners and industry. The provision of the Employer Engagement Forum Guide and associated Employer Register is a good example of best practice in the area of industry engagement.

3. The Panel commends the CCT programme development team for the adoption of a programme integrated assessment strategy as provided in the programme validation submission (pg. 70). Stages Two to Four (i.e. all award stages) include what are called "Level Completion Modules" (Stage Two: 5 ECTS credits; Stage Three: 10 ECTS credits; Stage Four: 20 ECTS credits). These capstone modules are designed to integrate and scaffold student learning, promote formative feedback and ultimately reduce assessment overload (but see Criterion 10 also).

4. The Panel commends CCT's ongoing commitment to staff Continuing Professional Development for FT and PT staff, both discipline-specific and pedagogical.

5. The Panel notes that CCT has recently purchased the centre where its programmes are delivered (30-34 Westmoreland Street, Dublin 2). The Panel commends CCT's inherent commitment to the provision of high-quality programmes in Higher Education as a long-term goal and enterprise.

6. The Panel commends the systematic supports provided to learners, particularly international students. Student success and well-being are at the heart of CCT's culture.

7. The Panel commends CCT for the development of student success initiatives and for their introduction of the Student Success Lead role. This is in line with best practice relating to student success (https://www.teachingandlearning.ie/publication/understanding-and-enabling-student-success-in-irish-higher-education/).

8. The Panel commends the CCT programme development team for the adoption of a programme integrated assessment (IA) strategy.

Special Conditions of Validation *(directive and with timescale for compliance)*

1. The programme development team should define and document the teaching and learning workload types (both contact and non-contact) in, and specific to, each module descriptor. This should be done in a way that both demonstrates the correlation of teaching and learning methods with the intended module learning outcomes and expresses, at the level of the module, the methodological progression throughout the programme in line with the learners' growing capacity for independent learning and problem-solving.

   Timescale: Demonstrable completion proposed as a condition for validation by QQI

2. The programme development team should define and document the parameters for the assessment of the module learning outcomes (in terms of assessment type and weighting for CA assessments and of outcomes covered) in, and specific to, each module descriptor. The Approved Programme Schedules (APSs) and module descriptors represent the contract with the student, and the student should reasonably be able to determine from these how the module credit is to be attained from the outset.

   Timescale: Demonstrable completion proposed as a condition for validation by QQI

Embedded programme 1: Bachelor of Science in Computing in Information Technology

Select one	Outcome
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
X	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. See principal programme above.

Commendations

1. See principal programme above.

Special Conditions of Validation *(directive and with timescale for compliance)*

1. See principal programme above.

Embedded programme 2: Higher Certificate in Science in Computing

Select one	Outcome
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
X	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. See principal programme above.

Commendations

1. See principal programme above.

Special Conditions of Validation *(directive and with timescale for compliance)*

1. See principal programme above.

Recommendation(s)

2. See principal programme above.

Summary of recommended special conditions of validation

1. The programme development team should define and document the teaching and learning workload types (both contact and non-contact) in, and specific to, each module descriptor. This should be done in a way that both demonstrates the correlation of teaching and learning methods with the intended module learning outcomes and expresses, at the level of the module, the

methodological progression throughout the programme in line with the learners' growing capacity for independent learning and problem-solving.

2. The programme development team should define and document the parameters for the assessment of the module learning outcomes (in terms of assessment type and weighting for CA assessments and of outcomes covered) in, and specific to, each module descriptor. The Approved Programme Schedules (APSs) and module descriptors represent the contract with the student, and the student should reasonably be able to determine from these how the module credit is to be attained from the outset.

Summary of recommendations to the provider

1. The CCT programme development team should review the programme title so that it reflects the employment spectrum of its graduates better and with more immediacy, which in turn will make the programme more attractive to prospective leaners.

2. The Panel acknowledges the justification provided by the CCT programme development team in relation to not including work placement on the programme. In view of the pedagogical and experiential value of work placement, the Panel however recommends that the programme development team further consider the incorporation of work placement into the programme. This further consideration of work experience can be aided by leveraging extant operational experience and quality assurance frameworks for work placement from across the Higher Education sector.

3. In the absence of work placement, CCT should strive to strengthen the industry involvement in their programme, for example by introducing series of industry speakers, routinely using industry-relevant case studies, etc.

4. It is recommended that CCT develop a weekly and annual delivery schedule for the Part-Time (PT) delivery mode well in advance of actual delivery in order to anticipate and plan for possible implementation issues.

5. CCT should clearly document the transition arrangements for the different student cohorts currently enrolled on the existing cognate degree programmes which are about to be retired/ceased. This information should then be made available to learners in an appropriate fashion.

6. See section entitled "Modules" below for conditions and/or recommendations relating to specific module descriptors (see Appendix 11 - Programme Module Descriptors).

7. The programme development team should review the Approved Programme Schedules (APSs) to ensure that the amount and type of contact hours allocated to each module accurately reflect the gradual development of the learner's capacity for independent learning and problem solving.

8. Module Feedback:

Module Title	Note(s)
General	• Reading lists should be reviewed to ensure that they are as up to date. • Module learning outcomes should be reviewed to ensure that they are written at the appropriate NFQ level and that their attainment is demonstrable.

	• The table showing the programme streams on pg. 59 of the programme validation submission needs to be corrected.
Introduction to Artificial Intelligence	• Amend the module title to Artificial Intelligence.
Object-Oriented Analysis and Design	• The programme development team should ensure that the module is categorised correctly in the programme streams (currently in the Traversal Skills stream).
Data Visualisation and Communication	• The programme development team should ensure that the module is categorised correctly in the programme streams (currently in the Traversal Skills stream).
Professional Development	• Consider moving this module to an earlier programme stage, where it may bring additional benefits to learners. While there is no work placement module, students will be encouraged to seek suitable internships in the summer months. Delivering *Professional Development* earlier (possibly even in Stage 1) would better prepare students to apply for such internships. The team might furthermore review the level of the module material, to ensure that the demands of this module merit the number of credits and are broadly in line with the level of the stage.
High Productivity	• The programme development team should consider changing the module title to a title which is less dogmatic and better reflects the content and intended outcomes of the module. • Ensure the reading list is up to date and appropriate to the module content and intended outcomes.
Wireless Networking	• The Module Content, Organisation and Structure section needs to be added to the module descriptor (currently missing).
Algorithms, Architecture and Design Patterns	• The programme development team should review the volume and relevance of the content proposed for this module.
Introduction to HCI	• The programme development team should correct the entry for the module in the indicative timetable.

Declarations of Evaluators' Interests

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Eva Juhl   **Date:**   7 January 2020

Signed:

Panel secretary: Dr Brendan Ryder   **Date:**   19 December 2019

Signed:

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